4.12 UTILITIES AND SERVICE SYSTEMS

Would the proposal result in a need for new systems or supplies, or substantial alterations, to the following utilities:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Power or natural gas?	☐	☐	X	☐
b) Communications systems?	☐	☐	☐	X
c) Local or regional water treatment or distribution facilities?	☐	☐	X	☐
d) Sewer or septic tanks?	☐	☐	X	☐
e) Stormwater drainage?	☐	☐	X	☐
f) Solid waste disposal?	☐	☐	X	☐

SETTING

POWER AND NATURAL GAS

Power

Typically, the analysis of impacts concerning the supply of electricity centers on whether a proposed project will use large amounts of electrical energy and whether the existing electrical supply is sufficient. These questions are not applicable to this project, which concerns the change of ownership of the electrical supply itself and thus deals with the production of electricity rather than its consumption. Therefore, the germane issue addressed in this chapter is the project's potential impact on the reliability of the electrical supply system. The factors involved in reliable electric service are described below.

Reliability

Reliable electrical service is an integral part of modern society, and its interruption can cause severe adverse consequences. Without electricity, police and fire services are disrupted, electrical mass transit systems are halted (potentially stranding people in tunnels), inhabitants of high-rise buildings are deprived of ventilation and elevator service, hospitals and medical clinics are limited in the care they can provide, perishable commodities spoil, and many businesses cannot operate. The consequences of a long-term electrical system failure can be particularly catastrophic. For example, in February 1998, the central commercial downtown of Auckland, New Zealand's largest city, lost power due to multiple concurrent failures of buried transmission cables sharing a single transmission corridor. Repairs took many weeks and included constructing a major overhead transmission interconnection. In the interim, hundreds of businesses were forced to shut down at least temporarily.

Reliability is a primary consideration in the design and construction of electrical generation, transmission, and distribution systems, as well as a main concern of public utilities and their regulators. In determining whether to approve SDG&E's divestiture application, the CPUC must ensure that facilities essential to the reliability of the electrical supply remain available and operational, while also fostering open competition and preventing an over concentration of market power.

Utilities and regulators alike recognize that maintaining 100 percent reliability in the electrical power supply system is impossible. Given this inherent limitation, the reliability of the electrical service system may be defined in several ways. From a customer's perspective, system reliability is a function of the simple question, "Is the power on?" From the utilities' and regulators' perspectives, system reliability is determined by several criteria, including the availability of sufficient electrical power generation to meet growing customer demand; the time required to restore power to customers following an outage; and the degree of built-in system redundancy to handle unexpected problems.

The electrical service system consists essentially of three components (see Figure 1.1):

- *Electrical generation facilities:* including fossil-fueled, nuclear, geothermal, wind, solar and hydroelectric generators;
- *Transmission systems:* long-distance transmission systems and substations that efficiently move the generated power from these sources to the local distribution systems; and
- *Local distribution systems:* local networks of substations, transformers, and wires that deliver the electrical power to the customer.

Each of these parts has distinct criteria for determining reliability. For generation, the available electrical generation capacity is generally considered adequate when available capacity is less than demand not more than one day in every ten years (Weatherwax, 1998). (Such a case would cause a blackout or loss of electricity within the service system.) For transmission systems, reliability is generally treated as a qualitative criterion that precludes single outages from endangering the system. Generally speaking, most significant disturbances in the Western Systems Coordinating Council (WSCC)[1] occur because of the failures in transmission or its interaction with generation.

The reliability of local distribution systems is judged with the understanding that outages of electrical power may occur as much as one hour per year, and that the primary concern is the quick restoration of service. The current CPUC standard for local-distribution reliability requires utilities to maintain sufficient resources to restore power within 24 hours to 90 percent of customers who lose service in an outage; within 48 hours to another 5 percent of customers who lose power; and within 72 hours to the remaining 5 percent of customers who lose power (D.98-03-036).

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[1] The WSCC region is comprised of California; the Pacific northwestern, mountain states, and inland southwestern states extending as far as western Texas; the Mexican state of Baja California del Norte; and the Canadian Provinces of British Columbia and Alberta.

Reliability, as it relates to the proposed project (divestiture of power plants), is primarily concerned with the generation portion of these three electrical service system components because the proposed sales would not significantly affect ownership or operation of transmission or distribution lines.

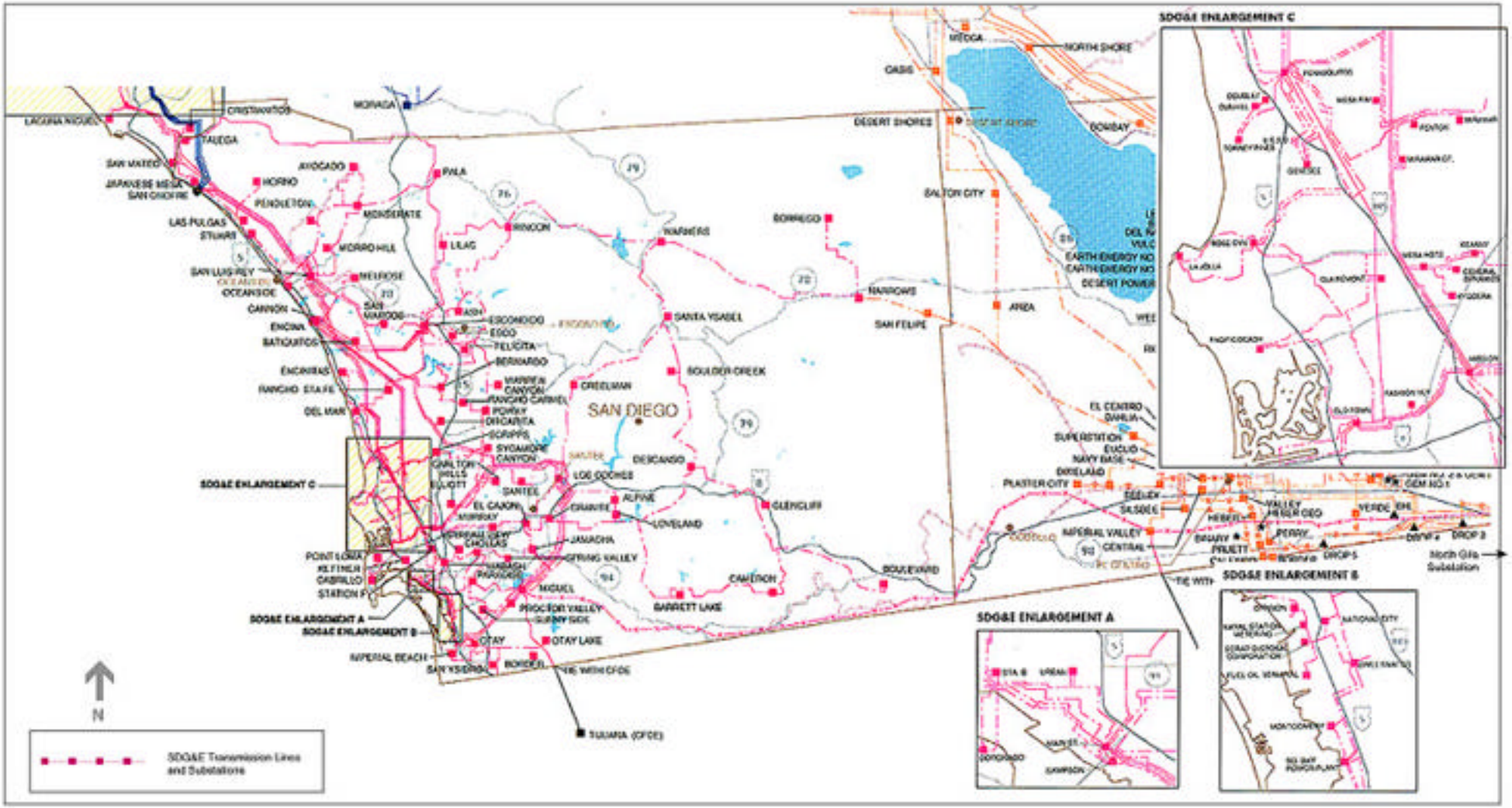
In addition to these statewide electrical service system norms, SDG&E has used its own reliability criteria for its system, based on WSCC requirements and the planning and operation criteria developed by the North American Electric Reliability Council. To determine these reliability criteria, SDG&E and the Independent System Operator (ISO) conducted three studies in recent years of operations in SDG&E's service territory. All three studies – released in April 1996 by SDG&E, in July 1997 by Power Technology Inc. for SDG&E, and in February 1998 by the ISO – concluded that all SDG&E generating resources are needed to maintain reliability of the electrical power supply system in San Diego County. These studies resulted in the classification of SDG&E's Encina and South Bay Power Plants and all 17 of its combustion turbines as "must-run," meaning that SDG&E or any new owner must keep such units available for dispatch by the ISO at designated times in order to satisfy reliability criteria.

The San Onofre Nuclear Generating Station (SONGS) is classified as "must-take," meaning that the ISO must take the output of the nuclear plant whenever it is on-line. Generation from SONGS is also considered important in maintaining reliability of the power supply system in San Diego County, as it supplies about 420 megawatts (MW) to SDG&E's system. However, if the interconnection at the San Onofre Substation between the systems of SDG&E and Southern California Edison (Edison) were severed, the output of SONGS would normally go only to Edison, which is why SONGS is not considered "in-system" generation for the purposes of this analysis.

Additionally, SDG&E must take the power output of all of the Qualifying Facility (QF) power plants in its system. QFs are those facilities that qualify for classification as must-take generating resources under the Public Utilities Regulatory Powers Act. QFs within SDG&E's system can supply up to 230 MW of generating capacity to SDG&E's system (Melby, 1998), though SDG&E only counts 174 MW of that capacity as "dependable" (SDG&E, 1997). However, because these QFs would generally not be available in the event of a major system disturbance, they are not considered a viable resource for the purposes of reliability planning.

Transmission and Distribution Service. In terms of the electrical power supply system, San Diego is located at the end of a transmission cul de sac. With the Pacific Ocean to the west and Mexico to the south, San Diego sits at the end of major transmission lines coming from the east and north (see Figure 4.12.1). (SDG&E also has an interconnection to the south with the Comision Federal de Electricidad, Mexico's nationalized electric utility, but power imports from Mexico are non-firm and are not currently considered a resource for reliability planning purposes.)

From the east, SDG&E can import up to 970 MW from the Palo Verde Substation over the Southwest Power Link, a 500 kilovolt (kV) overhead transmission line. The Southwest Power Link consists of three segments: one from the Palo Verde Substation near Phoenix to the North



SOURCE: California Energy Commission, March 1997

Directions of Axes by SDG&E / 990084

Figure 4.12.1
SDG&E Electrical Transmission Lines

Gila Substation near the California/Arizona border, jointly owned by SDG&E, the Imperial Irrigation District (IID), and Arizona Public Service; a second segment from North Gila to the Imperial Valley Substation jointly owned by SDG&E and IID; and a third segment from the Imperial Valley Substation to the Miguel Substation solely owned by SDG&E.

From the north, SDG&E can import up to 1,900 MW through five overhead transmission circuits, rated at 230 kV, that interconnect SDG&E's system with Edison's at the San Onofre Substation. The lines are owned by Edison north of San Onofre, and by SDG&E south of San Onofre. Because of the nature of the interconnected transmission grid, the total amount of power that SDG&E can import over the two transmission circuits (that is, from the east and from the north) is not the sum of the two capacities. The maximum that SDG&E can import into its system is about 2,450 MW (Sheaffer, 1998).

The record peak demand for electricity in San Diego County is 3,668 MW, and peak demand on an average day is more than 3,000 MW (Sheaffer, 1998). Therefore, San Diego County's electrical needs cannot be met by transmission alone, and SDG&E relies on electricity generated from facilities within the county to meet at least part of the total demand. In addition, generation in the county provides dynamic voltage support to the electrical system even during the few time periods when all load is served by transmission lines. If one or more of these transmission circuits were severed, the only generation available to replace the lost transmission capacity would be within the county, or possibly from a SONGS unit. If the interconnection at San Onofre were broken, system operators at SONGS normally would send the output of both SONGS units to Edison, but they do have the capability of routing the output of one SONGS unit to SDG&E territory and the other unit to Edison territory, supplying up to 1,080 MW or 1,020 MW in capacity (depending on which unit is used) to SDG&E's system. However, during system-wide disturbances, the Edison system separates from the SDG&E system, automatically taking all SONGS generation with it.

San Diego County Generating Units. In San Diego County, 35 electrical power generators are located at 15 locations. Approximately 1,644 MW of steam boilers (693 MW at South Bay and 951 MW at Encina) are designed to run continuously for long periods. The approximately 280 MW[2] of gas-fueled and diesel-fueled combustion turbines (CTs) are designed to meet emergency conditions (when a portion of the system goes down) and/or to back up the steam units (for peaking).

The 174 MW of dependable QF generating plant capacity in San Diego County (SDG&E, 1997) comes from more than two dozen plants, but only seven of those are larger than 15 MW in capacity, and SDG&E . During normal operations, the QFs supply a portion of SDG&E's load, but all but one of the QF plants are designed to trip off line in the event of a disturbance and none have "black-start" capability, meaning they could not restart during a power outage. SDG&E could call upon these QFs for voltage or Volt-Amp Reactive (VAR) support during system disturbances, but the QFs are not obligated to supply that service. Because of these limitations,

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2 Ratings vary several percent depending upon ambient temperature.

the QF generating facilities in San Diego County are not considered viable resources for reliability planning purposes.

System Disturbances. "Islanding" is fundamental to maintaining reliability of the electrical supply systems. Islanding is either the anticipatory or consequential separation of transmission grid areas because of system disturbances (such as electrical system outages and abnormal fluctuations in system frequency or voltage). Utilities use this procedure to avoid a complete blackout. Islanding is automatically or manually triggered in order to contain disturbances or protect vulnerable locations. At the time of separation, the islanded area becomes independent of the remaining transmission grid and must immediately support local loads with local generation. Islanded portions of the grid generally consist of one or more utility service territories.

Islanding requires two essential components: on-line generation within the "island" and rapidly acting load-dumping relays. Typically, electrical generators can "ramp up" (i.e., increase electrical generation output) at a rate of only 1 percent of on-line generating capacity per minute. This ramping rate is too slow to immediately offset a disturbance. Thus, when load begins to exceed available generation or transmission import capability, system frequency and/or voltage begins to drop, leading to separation when under-frequency and/or under-voltage protection devices automatically trip circuit breakers at designated substations. (In North America, the electrical system operates at 60 hertz (Hz) and typically varies less than 0.1 Hz during normal operations, which is important for maintaining constant electric motor speeds, keeping accurate time and reliable operations of other electrical and electronic machinery.)

In SDG&E's system, separation at the two major transmission interconnections occurs immediately when frequency drops to 57 Hz. Additionally, if frequency drops below 59.5 Hz for five minutes or longer, protection devices will trip circuit breakers at designated distribution substations, thus shedding load until frequency rises above 59.5 cycles. Some substation circuit breakers are also protected by under-voltage protection devices that shed load when both frequency and voltage drop below specified levels (Melby, 1998).

Once the generators ramp up, they can restore load after a separation event or help alleviate moderate overloads of the transmission system. Therefore, only that load equal to the amount of generation operating at the time of the disturbance is supported without interruption. CTs are most useful in restoring load during an islanding event because they can start up and begin generating to the grid in less than five minutes. Steam units at South Bay and Encina can start up using the power generated from their on-site CTs, but startup of a steam unit usually takes several hours, depending upon the initial temperature in the steam boilers.

SDG&E previously had both the automatic and operational capability to island its service territory. Since the advent of electric industry restructuring (April 1998), the ISO controls this islanding capability and will maintain this control regardless of power plant divestiture.

Should a severe system disturbance occur that causes the frequency at the San Onofre and/or Miguel Substations to fall below specified thresholds and power is flowing into the county, all transmission lines from either or both substations would automatically open to protect the in-

system on-line generation from potential crippling damage. This would partially or completely disconnect the electrical service system in San Diego County from the rest of the outside electrical system.

A system disturbance originating as far away as Alberta, Canada, Colorado, or Baja California, Mexico, could trigger this separation scheme for San Diego. In 1996, for example, a fully loaded transmission line in the Pacific Northwest sagged because of high ambient air temperatures, touched a tree and short-circuited. The operator in the Pacific Northwest did not notify California utilities that a critical line had failed or these utilities would have reduced imports from the Pacific Northwest and increased local generation throughout their service territories. Next, a second transmission line importing power from the Pacific Northwest failed, triggering a cascading power outage that affected customers throughout California, including San Diego County. In this instance, SDG&E was able to restore electrical service without isolating its entire electrical service system from the interstate electrical network. Instead, SDG&E's system was islanded along with that of Edison, the Los Angeles Department of Water & Power, IID, Arizona Public Service, and several utilities in New Mexico (Melby, 1998). However, though SDG&E remained interconnected with those utilities, it relied on in-system generation units to carry essentially all of the county's load.

Upon electrical separation (or islanding), loads are dropped manually by system dispatchers and/or automatically by under-voltage or under-frequency protection devices until remaining loads equal the generation on line *at that instant* from power plants inside the island. (Like all utilities, SDG&E would shed low-priority loads first and high-priority loads, such as hospitals and police dispatch centers, last.) Once stability (i.e., balanced load and generation) occurs, the slow and meticulous process of restoring load, by adding supplemental generation and reconnecting lost or shed loads, can begin on an incremental basis. The Encina and South Bay Power Plants and the 17 additional CTs scattered around the county ensure up to 70 percent of the peak-demand load (depending upon weather conditions and other factors that affect use of electricity) is sustained in San Diego County during islanding conditions. Without these power plants, the SDG&E service area cannot have electrical power while it is separated from the rest of the grid, or even if it remains connected to some other utility systems in a larger island.

Because a transmission network disturbance can occur at any time, ISO-implemented reliability plans ensure the amount of local generation serving SDG&E's distribution system includes an allowance for units that may be out for maintenance at the time of a disturbance. The ISO operating procedure (ISO, 1998) handles this contingency by committing additional local generation capacity equal to or larger than the largest unit out of service.

Absent construction of a new transmission corridor and upgrading of the distribution system, San Diego County will continue to need in-system generation. Without in-system generation and given the transmission configuration, SDG&E's distribution system could lose power, with potentially severe and costly consequences. In the unlikely event that both transmission circuits into the county were disabled, the entire service area would suffer a complete blackout, if not for in-system generation. Therefore, the CPUC, the ISO, SDG&E, and any new owner of the in-system generating units are obligated to keep these units available at least until replacement

power is available, either in the form of a new transmission circuit or a new or refurbished power plant within the county.

Natural Gas

SDG&E is the only provider of natural gas transmission services to the plants. Natural gas is provided via SDG&E's intrastate pipelines operating at transmission-level pressures.

COMMUNICATIONS

Public telephone service at the plants is provided by Pacific Bell. A number of other companies, including GTE, AT&T, and Cellular One are used for cell phone and pager communication services.

LOCAL OR REGIONAL WATER TREATMENT OR DISTRIBUTION FACILITIES

The San Diego County Water Authority (SDCWA) delivers water through about 24 wholesale agencies to about 2.6 million people in San Diego County and is the ultimate water supplier for the vast majority of water used at SDG&E's power plants. SDCWA receives between 75 and 90 percent of its water from the Metropolitan Water District of Southern California system and about 15 percent from other sources (including groundwater and surface water from local watersheds). Water is conveyed to the San Diego area through a series of aqueducts, tunnels, and transmission mains, with open reservoirs providing storage at multiple points along the way.

Transmission mains deliver water into one or more of 33 terminal, raw-water, surface reservoirs in San Diego County. Treated water is held in any of 333 concrete or steel reservoirs. From these reservoirs and tanks, water is distributed throughout the county using a network of about 6,823 miles of pipeline ranging in diameter from 2 to 60 inches.

At capacity, the treated-water reservoirs within the county can hold approximately 1,304 million gallons. Water treatment is provided at multiple points along the water supply system. All water passing through each reservoir is disinfected. The SDCWA operates a system-wide sampling and testing program to monitor water quality.

South Bay Power Plant

The South Bay Power Plant receives water from the Sweetwater Authority (SWA). SWA is one of SDCWA's wholesale customers and currently provides raw (untreated) water to the Cities of Chula Vista, National City, and Bonita; major industrial customers; smaller industrial and business customers; and agricultural customers. In total, SWA provides water to approximately 166,000 people throughout southern San Diego County.

SWA obtains raw water primarily from SDCWA and is exploring the possibility of developing local groundwater sources for the purpose of reselling the water to agricultural, industrial, and domestic users. SWA operates raw water conveyance, water treatment, and treated water distribution facilities.

The SWA's primary raw water source is the Southern California Aqueduct, which delivers water into the region from the Colorado River. SWA delivers treated water to the South Bay plant for restrooms, safety showers, and water fountains. Unlike other SDG&E combustion turbines, the on-site CT at the South Bay Power Plant does not use municipal water for oxides of nitrogen (NOx) emission reduction. Instead, the South Bay CT uses steam from the on-site boilers for NOx abatement.

Encina Power Plant

The Encina Power Plant is served by the City of Carlsbad Water Department, which serves all businesses and residences within city limits. The City of Carlsbad also receives its water from SWA. The on-site CT at Encina, like other SDG&E CTs (except the one at South Bay), uses small amounts of municipal water for NOx emission reduction.

Combustion Turbines

The 7 combustion turbine sites where the 17 additional CTs are located are served by the local government water departments. The CTs are unmanned, meaning very little water is used at the sites for human purposes, though they do use small amounts of municipal water when running for NOx emission reduction. (All SDG&E CTs have atomized water, including steam, injected into the CT exhaust to reduce NOx emissions.)

SEWER OR SEPTIC TANKS

South Bay Power Plant

The City of Chula Vista Department of Public Works operates and maintains the city's sanitary and storm sewer infrastructure. The city's wastewater collection, treatment, and disposal system consists of a combined sewer system (which collects both sewage and stormwater). Wastewater is transported to the City of San Diego's Point Loma treatment facility. The collection and conveyance system consists of approximately 320 miles of various sizes of underground sewer pipes and transport structures located throughout the city. Ultimate disposal of the primary treated wastewater effluent is through a deep ocean outfall.

The South Bay plant discharges its domestic wastewater into Chula Vista's combined sanitary/sewer system, pursuant to an industrial waste (sewer) discharge permit (No. 13-0019, Revision No. 00B) from the Cities of Chula Vista and San Diego.

Encina Power Plant

The City of Carlsbad Department of Public Works operates and maintains the city's sanitary and storm sewer infrastructure. The city's wastewater collection, treatment, and disposal system consists of a combined sewer system (which collects both sewage and stormwater) and a water pollution control plant. The collection and conveyance system consists of various sizes of underground sewer pipes and transport structures located throughout the city. Ultimate disposal of treated wastewater effluent is currently through outfalls to the Pacific Ocean.

The Encina plant discharges its domestic wastewater into the city's combined sanitary/sewer system, pursuant to a city permit.

Combustion Turbines

The seven combustion turbine sites are normally unmanned and have no sanitary facilities associated solely with the CTs. Some of the sites are located adjacent to SDG&E maintenance facilities, which discharge small amounts of sewage into the local municipal sanitary/sewer systems. The CT sites do not discharge any wastewater to the sewers at the CT sites.

STORMWATER DRAINAGE

South Bay Power Plant

The South Bay plant does not utilize the city's sewer infrastructure for stormwater collection. Stormwater runoff at the South Bay plant is collected by on-site, SDG&E-maintained stormwater collection facilities and discharged to San Diego Bay, pursuant to National Pollution Discharge Elimination System (NPDES) permits (described in Section 4.4, Water Resources).

Encina Power Plant

The Encina plant does not utilize the city's sewer infrastructure for stormwater collection. Stormwater runoff at the Encina plant is collected by on-site, SDG&E-maintained stormwater collection facilities and discharged to the Pacific Ocean, pursuant to NPDES permits (described in Section 4.4, Water Resources).

Combustion Turbines

Stormwater runoff at all the CT sites are currently routed into the stormwater collection system of the applicable city or military base. Disposal of stormwater runoff at the CT sites is currently not regulated. However, the State Water Resources Control Board has informed SDG&E of the Board's intention to regulate stormwater discharges at the two largest CT sites, Miramar and Kearney, under NPDES General Permit No. CA S000001, Order No. 97-03-DWQ. Those two sites together account for 11 of SDG&E's 17 CTs, and all but two of the CTs not located on military bases. The remaining two CT sites located on civilian land, at Division in San Diego and in the city El Cajon, are considerably smaller than the other sites, and thus have much smaller amounts of stormwater runoff.

SOLID WASTE DISPOSAL

Municipal solid wastes are generated from the office facilities at the Encina and South Bay Power Plants. The solid wastes at the plants are removed and disposed of by the Cities of Carlsbad and Chula Vista. None of the other sites generate solid waste. Hazardous wastes and the offsite disposal of the industrial waste treatment plant sludge from each plant are discussed in Section 4.9, Hazards.

CHECKLIST ISSUES

a) POWER OR NATURAL GAS

Power

The project involves the generation of electricity, rather than its use. The plants being divested are not expected to consume substantially more electricity than they do currently. Thus, the project would not result in a need for new or substantially altered electrical power systems or supplies.

The project would result in changes to the electrical power systems such that the owners of the divested plants would not own the transmission and distribution systems. Presently, SDG&E operates its power plants so as to protect its assets – the power plants and the transmission and distribution systems. Under divestiture, new owners would also operate the power plants so as to protect their assets, but they would only own the power plant and not the transmission and distribution system. SDG&E occasionally must decide what is an acceptable electrical system failure (e.g., whether to "blow out" a transformer and let a portion of the electric grid fail, or to accept failure at a power plant and let the power plant shut down). Although the new owners would depend on the transmission grid for delivery of their generation, they would not necessarily have the same incentive to protect the grid and could be inclined to primarily protect their own newly acquired resources.

The Independent System Operator (ISO), a new state corporation created by Assembly Bill 1890, now coordinates the scheduling and dispatch of electricity and ensures that the reliability of the transmission system is maintained. The ISO controls and operates the state's transmission system to schedule delivery of electrical power supplies and ensure all standards for transmission and reliability service are met. The ISO charges a tariff regulated by the Federal Energy Regulatory Commission to cover the cost of operating the system to ensure reliability. Entities that meet the reliability standards established by the Western Systems Coordinating Council (WSCC) and CPUC can "ship" electricity on the transmission system. Additionally, the CPUC will continue to have some statutory responsibilities for system reliability.

Conclusion

Because the project would not substantially alter existing power systems or result in a need for new systems or supplies, impacts related to electrical power systems would be less than significant. In addition, the ISO, CPUC, the North American Electric Reliability Council, and the WSCC will retain their responsibility to periodically assess the reliability of the transmission grid and accordingly take action to ensure all reliability requirements are maintained.

Natural Gas

With divestiture, new owners may tend to operate the power plants and CTs more, potentially increasing the amount of natural gas used. The exact amount of additional gas supplies needed, or whether this potential increased consumption would be more significant than load growth-

related increases in gas consumption, are unknown. SDG&E's gas transmission and distribution system currently has sufficient excess capacity during much of the year – enough to accommodate any reasonably foreseeable increase in gas consumption at the divested plants. However, gas deliveries into SDG&E's service territory are occasionally curtailed during the winter heating season, which could force a switch to alternate fuel supplies at Encina, South Bay and/or the CTs during those times.

Conclusion

The natural gas delivery system in San Diego County is of sufficient size to accommodate any reasonably foreseeable increase in gas demand due to divestiture during most of the year, and the gas-fired plants targeted for divestment all have the ability to switch to alternate fuel supplies during the few times that gas deliveries are curtailed. The project is neither expected to result in a significant need for new natural gas systems or supplies, nor is it expected to substantially alter existing natural gas systems or supplies. Therefore, the project is not expected to have a significant effect on the delivery of natural gas within San Diego County.

b) COMMUNICATIONS

There are no foreseeable communications systems effects that would result from the project. None of the power plants to be divested would have a direct impact on communication systems, and communication services for the plants and surrounding areas would continue after project implementation.

Conclusion

Because the project would not substantially affect communication systems, no impacts related to communication systems would result from the project.

c) LOCAL OR REGIONAL WATER TREATMENT OR DISTRIBUTION FACILITIES

The project could result in increased operations at the plants and therefore require additional water for cooling. Cooling water for the South Bay and Encina plants is supplied from the San Diego Bay and Pacific Ocean, respectively, which do not serve as a resource for raw water supply for local water districts. The great majority of water for the cooling processes at the fossil-fueled plants is returned to the water bodies from where it is drawn.

The cooling water system is separate from the treated, freshwater municipal systems that provide potable water to the plants and to the CTs. The water for domestic use at the fossil-fueled plants is supplied by the local water systems. The fossil-fueled plant operations do not currently use large amounts of domestic water. The use of potable water supplied by the water districts could increase if the plants were to employ more workers to operate the plants at higher levels, and could increase at the CTs if they were operated at higher levels. The amount of additional consumption would be small and would not have a significant effect on the quantity of raw water

supplies for affected water utility districts. Therefore, the potential impact of the project on the availability of water in San Diego County is less than significant. (Impacts to surface and groundwater quality are discussed in Section 4.4, Water Resources, of this Initial Study.)

Conclusion

The project would not be expected to substantially increase demand for, or require alterations to, the domestic water supply or distribution facilities for affected water utility districts.

d) SEWER OR SEPTIC TANKS

The project could result in increased operations at the plants. The potential increase in operations and employees at the South Bay and Encina plants could incrementally increase the volume of wastewater disposed of in the local sanitary sewer system. The potential increase in wastewater generation would not be expected to require extensions of new sewer infrastructure or alterations to existing sewer lines. All future wastewater disposal would be subject to the applicable city's sewer permit, which would be transferred to the subsequent owner. In addition, the potential small wastewater increase would not be expected to significantly decrease the capacity of the applicable city's wastewater treatment facilities.

Conclusion

The project would not result in significant impacts to wastewater generation, transmission, treatment, or disposal.

e) STORMWATER DRAINAGE

The project would have no effect on the volume or frequency of storm water drainage, and therefore would not be expected to require extensions of new storm water drainage infrastructure or alterations to existing drainage systems. All future storm water drainage would be subject to either the applicable city's sewer permit or the National Pollution Discharge Elimination System permits issued by the State Water Resources Control Board, either or both of which would be transferred to the subsequent owner.

Conclusion

The project would not result in significant impacts to existing storm water drainage systems.

f) SOLID WASTE DISPOSAL

The project may cause a slight increase in solid waste disposal as a result of minor construction associated with ownership transfer or the modest addition of employees at the plants. Potential increases in solid waste disposal are anticipated to be small.

An increase in operations and addition of employees at the plants under new owners would result in an incremental increase in the need for solid waste collection and disposal. Accommodating

the potential increase in operational solid waste would not adversely affect solid waste disposal service or significantly affect the estimated lifetime of the landfills serving the plants.

Conclusion

Because anticipated increases in solid waste disposal would be relatively small, and some would be only temporary, impacts to solid waste disposal would be less than significant.

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